FIG. 1B binding of [^{125}I][Phe43]-IL-13-GlyTyrGlyTyr in the presence of increasing concentrations of unlabelled IL-13 (·) and of IL-4 (o);

FIG. 1C cross-linking experiments using radioactive IL-13 in the absence (lane a) and in the presence of a one hundred times excess of unlabelled IL-13 (lane b) or of IL-4 (lane c);

FIG. 1D inhibition of the secretion of IL-6 induced by IL-13 and IL-4 in the presence of a monoclonal antibody specific for the IL-4R chain and the IL-4 antagonist Y124DIL-4.

-Figure 2: Nucleotide sequence of the cDNA of IL-13Rß (SEQ ID NO. 1), and comparison of the protein sequences of IL-5R (SEQ ID NO. 5) and IL-13Rß (SEQ ID NO. 2).

FIG. 2A & 2B nucleotide sequence of the cDNA of IL-13Rß (SEQ ID NO. 1). The amino acids corresponding to the deduced signal peptide of the nucleic sequence are indicated in italics and those corresponding to the transmembrane domain are indicated in bold characters. The potential N-glycosylation sites (Asn-X-Ser/Thr) are underlined;

FIG. 2C alignment of the amino acids of the IL-13Rß (SEQ ID NO. 2) and IL-5R (SEQ ID NO. 5) sequences. The protein sequences of IL-13R (SEQ ID NO. 2) and IL-5R (SEQ ID NO. 5) are aligned as described above (24). The cysteine residues and the WSXWS (SEQ ID NO. 13) motif which are characteristic of this family of receptors are boxed.

FIG. 3: patterns of expression of the IL-13Rß mRNA. The RNA was prepared from the following cells: Caki-1 (lane a), A431 (lane b), TF-1 (lane c), U937 (lane d), Jurkat (line e) and IM9 (lane f).

C' cont

Figure 4 characterization of the recombinant IL-13Rß receptor for IL-13. The COS-7 cells are transfected with IL-13Rß cDNA and used for:

FIG. 4A studies for the binding of radiolabelled IL-13 (inset) by Scatchard analysis of the saturation curve;

FIG. 4B cross-linking experiments using radiolabelled IL-13 in the absence (lane a) and in the presence of a one hundred times excess of unlabelled IL-13 (lane b);

FIG. 4C & 4D cotransfection experiments using cloned IL-13Rß, IL-4R (gp140) and the γc chain followed by the binding of radiolabelled IL-13 (c) or of IL-4 (d). The black and white columns represent the specific binding of IL-13 and of IL-4 respectively.

FIG. 5: inhibition of the binding of IL-13 to IL-13Rß by the soluble form of the receptor (IL-13Rßs) in transient expression. The expression of IL-13Rß s in the supernatant of the cells transfected with 2034 is tested by inhibition of the binding of IL-13 on cells transfected with IL-13Rß (2036). The supernatants are tested in the crude state by diluting them one half in the iodinated ligand.

2036 NSB: nonspecific binding in the presence of an excess of unlabelled IL-13.
2036 BT: total binding on cells transfected with 2036
2036 + sgt 2034: binding to cells transfected with 2036 in the presence of supernatant of cells transfected with 2034.
2036 + sgt pSE1 : control

- FIG. 6: inhibition of the binding of IL-13 to IL-13Rß by the soluble form of the receptor (IL-13Rß) on stable lines.
T2036-22: total binding on the clone IL-13Rß (2036-22) in the absence of supernatant of clone secreting IL-13Rßs (reference 100%)
2034-4
2034-6
2034-19 4 clones IL-13Rßs
2034-21
1274-20: in the presence of supernatant of CHO cells not expressing IL-13Rßs (control).

-Figure 7: nucleotide sequence of the IL-13Rß (SEQ. ID NO. 3) cDNA and comparison of the protein sequences of human IL-13Rß (SEQ. ID NO. 4) and of murine IL-13Rß (SEQ. ID NO. 6).

FIG. 7A & 7B Nucleotide sequence of the IL-13Rß (SEQ. ID NO. 3) cDNA. The amino acids corresponding to the signal peptide deduced from the nucleic sequence are underlined with a dotted line and those corresponding to the transmembrane domain are underlined with a double line. The potential N-glycosylation sites (Asn-X-Ser/Thr) are boxed.

FIG. 7C & 7D Alignment of the amino acids of human IL-13Rß (SEQ. ID NO. 4) and of murine IL-13Rß (SEQ. ID NO. 6). The protein sequences of human IL-13Rß (SEQ. ID NO. 4) and of murine IL-13Rß (SEQ. ID NO. 6) are aligned as described above (24). The cysteine residues and the motif WSXWS (SEQ. ID NO. 3) which are characteristic of this family of receptors are boxed.

C1 Cont

-Figure 8: characterization of the recombinant IL-13Rß.
The CHO or COS-3 cells transfected with the IL-13Rß and/or IL-4R cDNA and used for:

FIG. 8A & 8B studies of the binding of iodine-125 labelled IL-13 by Scatchard analysis of the saturation curve with CHO cells transfected with IL-13Rß cDNA (A), transfected with IL-13Rß cDNA and IL-4R cDNA (B), transfected with IL-13Rß cDNA (C) and transfected with IL-13Rß cDNA and IL-4R cDNA (D),

FIG. 8A & 8B competition experiments of binding of [^{125}I]-IL-13 on CHO cells transfected with IL-13Rß cDNA (E), transfected with IL-13Rß cDNA and IL-4R cDNA (F), transfected with IL-13Rß cDNA (G) and transfected with IL-13Rß cDNA and IL-4R

cDNA (H). The white and shaded columns represent respectively the specific binding of radiolabelled IL-13 in the presence of an excess (1,000 times more) of IL-13 or IL-4, the black columns represent total binding.

C1 Cont

- FIG. 9: comparison of the electrophoretic mobility in EMSA of cellular extracts expressing the receptor for IL-4 alone (CHO-4), the receptor for IL-13Rß alone (CHO-13) or the combined receptors IL-13Rß and IL-4R (CHO-4-13) after activation of the CHO cells in the presence of IL-4 or IL-13 (4 or 13), c representing the nonactivated control.

Please replace the paragraph beginning at page 24, line 6 with the following rewritten paragraph.

C2

Four potential N-glycosylation sites are located in the extracelluar region. It is important to note that two consensus motifs considered as signatures of the type II family of cytokine receptors (30) are also present, the first being derived from an N-terminal disulphide bridge loop structure, the second being the WSXWS (SEQ. ID NO: 13) type motif located at the C-terminal end of the extracellular region. The very short cytoplasmic sequence might explain why it is only the receptor complex shared by IL-4 and by IL-13 in the Caki cells which transduces a signal in the cell.

Please amend Figures 1, 2, 4, 7 and 8 as indicated in red on the sheets submitted herewith.

In the Claims

Please cancel claims 1-4, 37 and 39-43 without prejudice, and add new claims 44-59.

C3

44. (New) A purified polypeptide comprising an amino acid sequence selected from the group consisting of: